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Smart**CLOUD** Compute



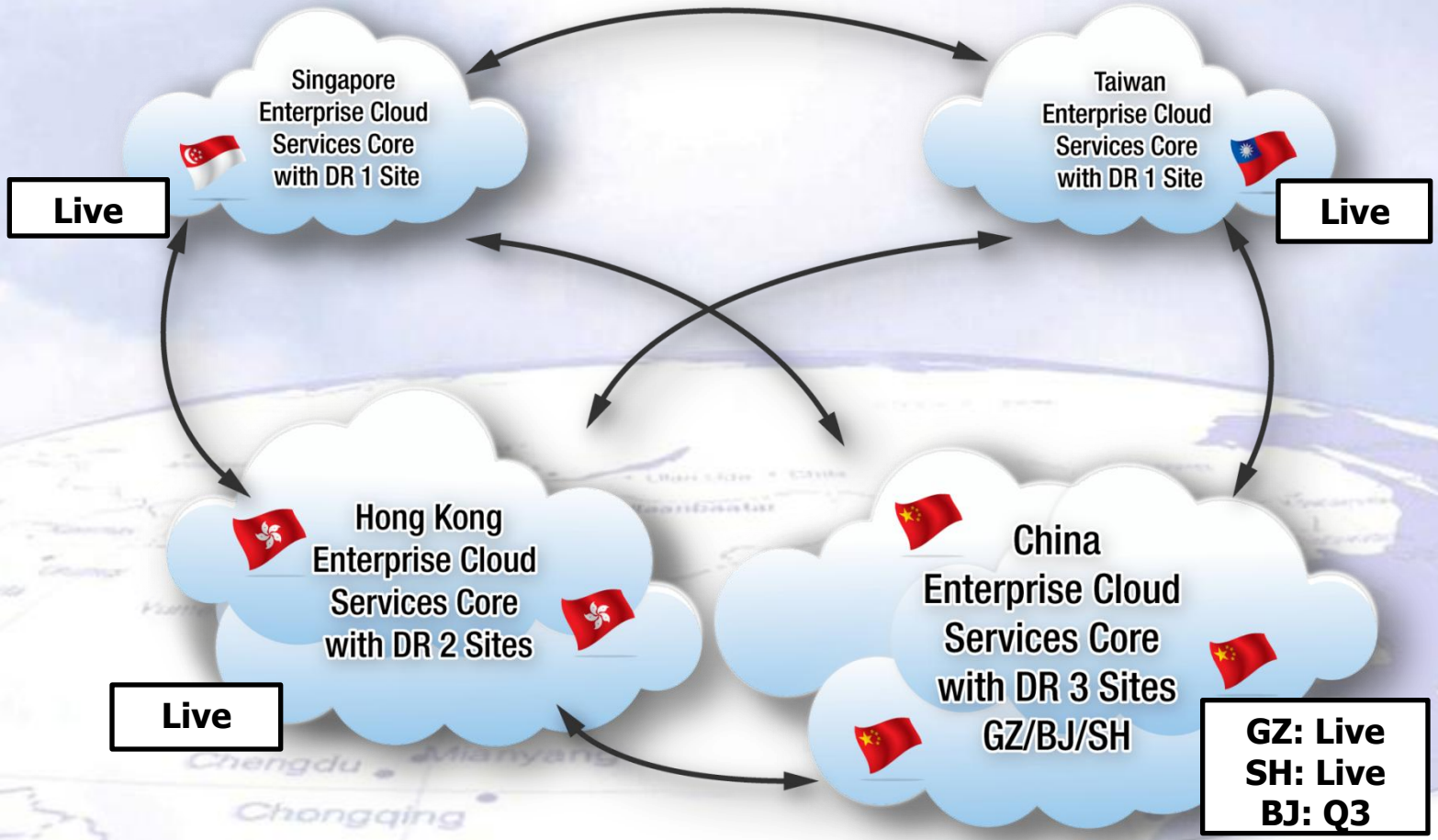
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CPC SmartCLOUD Compute Services Private Cloud Zone – Geographic Setup



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- **SmartCLOUD Compute service is a cost effective and one stop comprehensive virtual server **IaaS** solution based on **VMWare vSphere Enterprise Plus suite** in Hong Kong, China, Taiwan and Singapore.**
- **High Availability protection to guarantee service availability up to **99.99%**.**
- **Flexibility of adjusting processor, memory and storage capacity, ideal for organization that their IT resources capacity is high variable.**



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星期日 報 21.12.2011 星期三

中信國際電訊CPC獲VCloud認證

【本報訊】中信國際電訊CPC最近獲VCloud認證，成為全球首家獲得此項認證的電信服務商。VCloud認證是由VMware公司頒發，旨在表彰在雲端運算領域表現卓越的公司。CPC此次獲得認證，標誌著其在雲端運算技術和服務質量方面達到了國際領先水平。CPC表示，這將有助於其更好地服務全球客戶，推動企業雲化發展。

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2011年12月21日 星島日報

「IT Square編輯之選」2011最佳雲基礎服務供應商大獎

中信國際電訊CPC SmartCLOUD雲運算解決方案

安全穩定建構 助企業全球發展

除著雲端科技的成熟，雲端服務趨向多元化，其高度的靈活性和對企業競爭力的有莫大好處。然而，有不少企業在享受雲端服務好處的同時，卻又擔心雲端的安全性和可靠性。由中信國際電訊CPC所提供的SmartCLOUD 雲運算服務，絕對是企業雲化的安心之選。

中信國際電訊CPC憑藉其在技術和服務方面的卓越表現，榮獲「IT Square編輯之選」2011最佳雲基礎服務供應商大獎。SmartCLOUD雲運算解決方案以其安全、穩定、靈活的特點，為企業提供了可靠的雲端服務。該方案支持多種應用場景，包括數據中心遷移、應用開發和測試等。CPC表示，將繼續致力於提升服務質量，為客戶提供最佳的雲端體驗。

SmartCLOUD 雲運算解決方案

靈活高效的雲端運算服務

中信國際電訊CPC SmartCLOUD 雲運算解決方案，為企業提供安全、穩定、靈活的雲端服務。該方案支持多種應用場景，包括數據中心遷移、應用開發和測試等。CPC表示，將繼續致力於提升服務質量，為客戶提供最佳的雲端體驗。

「IT Square編輯之選」2011大獎方案

中信國際電訊CPC SmartCLOUD雲運算解決方案

靈活高效 安全穩定

雲端運算在過去幾年大行其道，成為一股新勢力，但雲端科技其實早已滲透到我們的生活中。大家經常接觸的Gmail、Yahoo等服務，便涉及大量的雲端技術應用。除著雲端科技的成熟，雲端服務趨向多元化，對增強企業的競爭力有莫大好處。然而，不少企業在享受雲端服務好處的同時，卻又擔心雲端的安全性和可靠性。由中信國際電訊CPC所提供的SmartCLOUD 雲運算解決方案，絕對是企業雲化的安心之選。

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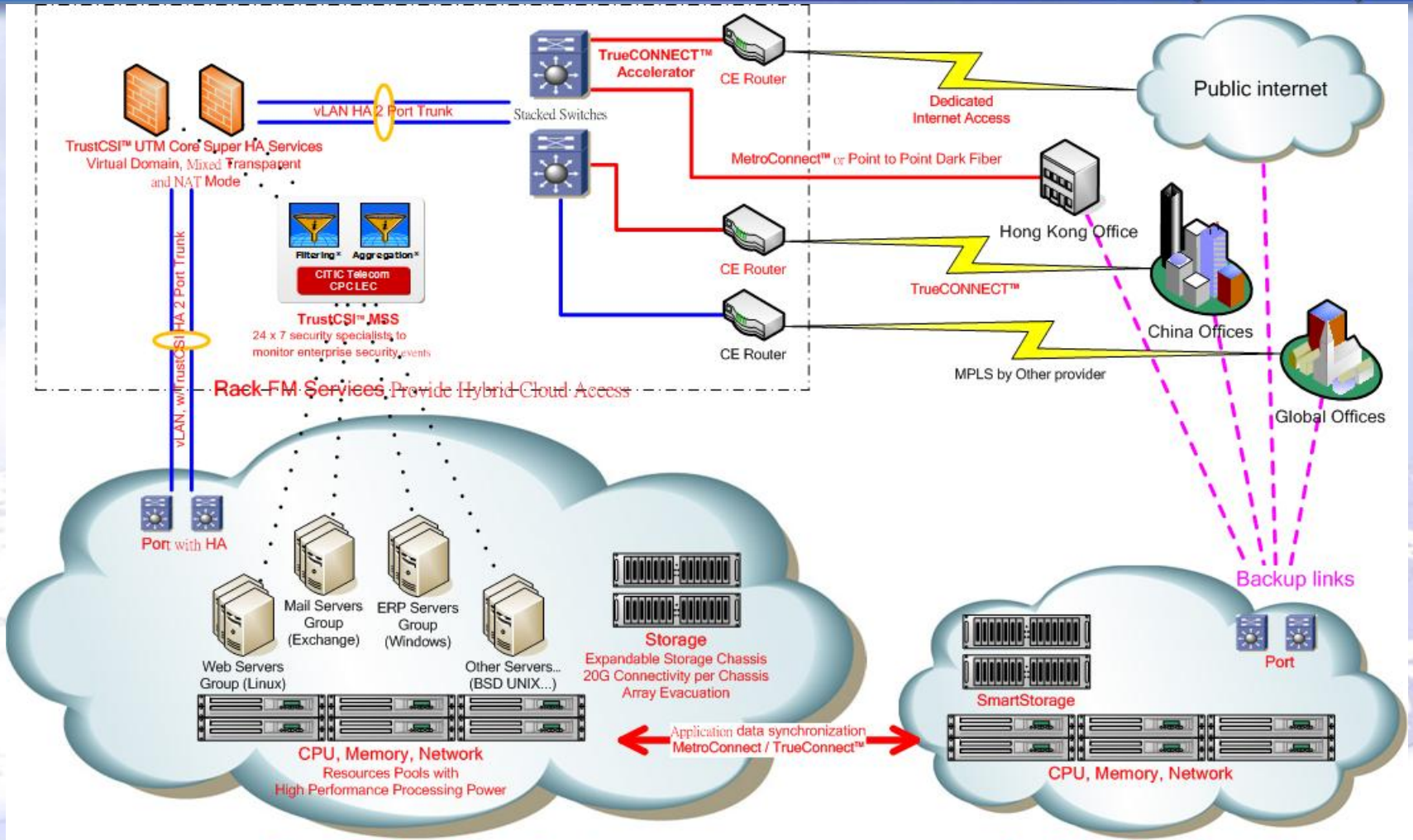
2011年10月26日 IT Square

2012年02月 IT Square

Case Study – One stop total Solution Enterprise Cloud with DR



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SmartCLOUD Compute Service (Primary)

SmartCLOUD Compute Service (DR)

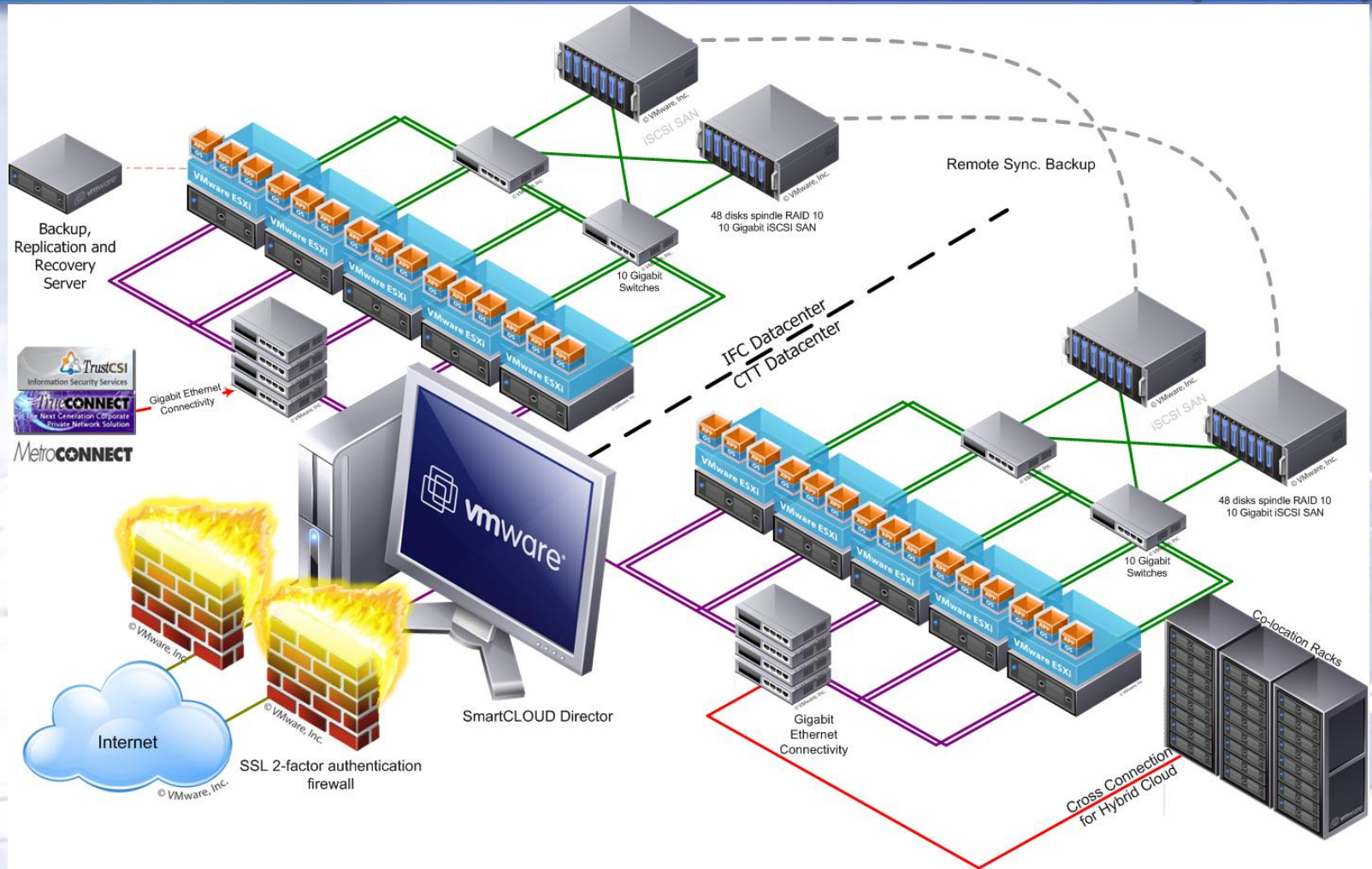


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CPC SmartCLOUD Compute Services Infrastructure Diagram (HK)



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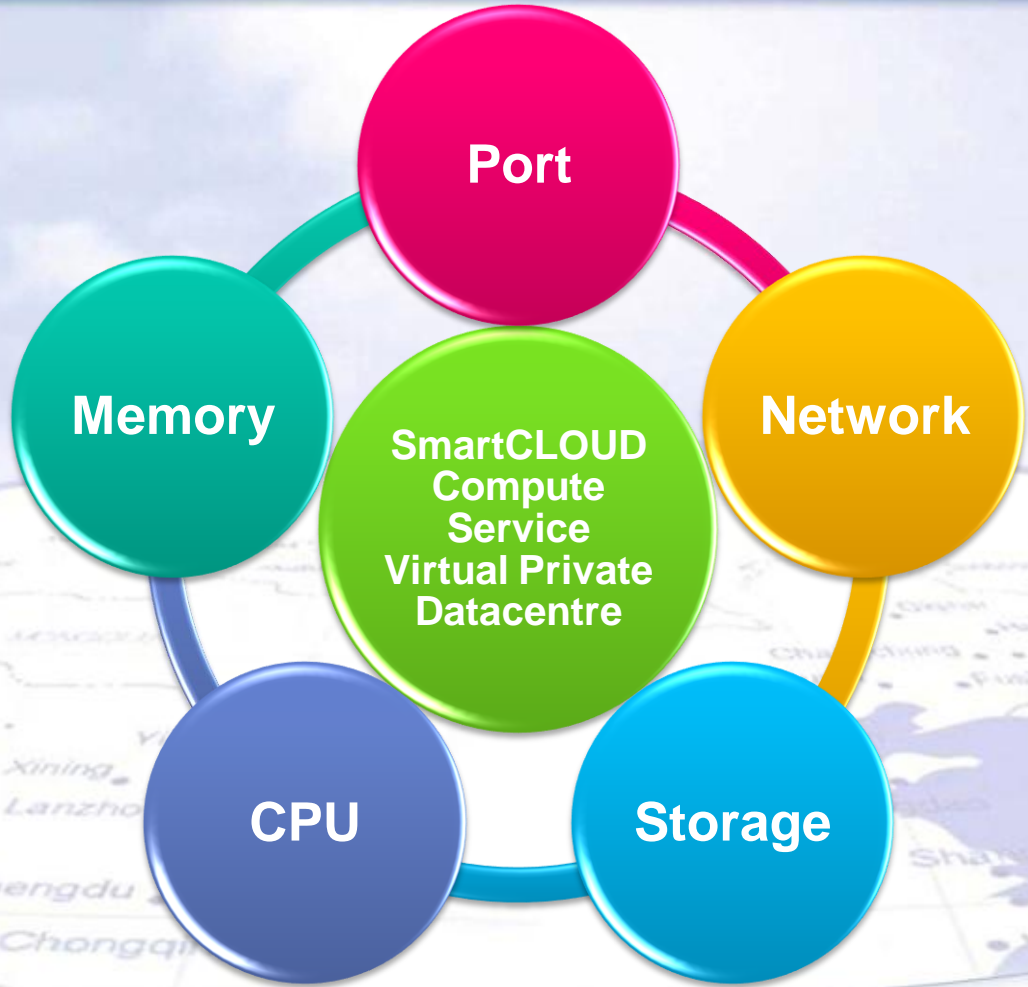


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CPC SmartCLOUD Compute Services Component Matrix



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CPC SmartCLOUD Compute Services

Virtual Private DC 5 Components



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Component	Description
CPU	<ul style="list-style-type: none"> •One VM allotment for every 3GHz vCPU subscription. •CPU core can be adjusted for application needs (up to 8). •Subscribed per GHz. (Minimum 3GHz)
Memory	<ul style="list-style-type: none"> •High performance 1333MHz DDR3 virtual processing memory. •Subscribed per Gigabyte. (Minimum 1GB)
Storage	<ul style="list-style-type: none"> •High performance, scalable and expandable 20G iSCSI SANs. •Subscribed per 100 Gigabyte block. (Minimum 200GB)
Network	<ul style="list-style-type: none"> • Provides virtual switching environment for private network Cloud zone. •Subscribed by number of virtual network per Cloud site.
Port	<ul style="list-style-type: none"> • Provides Internet, MPLS and other network connections through GE interface. •Subscribed by number of individual physical port.



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In terms of stability

- 1) HA design of SAN storage to avoid single point of failure
- 2) RAID 1+ 0 design on SAN storage to ensure no data loss
- 3) 7 sets of computing machine to achieve fault tolerance and avoid single point of failure
- 4) Guaranteed I/O speed duo to 10G speed per iSCSI channel
- 5) Our data center is in Tier-3 design, customers can reduce electricity concerns

In terms of scalability

- 1) Instantly expansion of resources pool according to organization scale
- 2) Prevent over estimation from purchasing physical servers to build DR site

In terms of cost reduction

- 1) Cost of electricity
- 2) Cost of data center rental charge
- 3) Cost of software license (E.g. VMware Enterprise Plus License)
- 4) Cost of hardware maintenance
- 5) Cost of human support



Benefit on using SmartCLOUD Compute DR & Backup



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Benefit of using SmartCLOUD Compute as DR and Backup Solution

1. A total Solution consists of Computing Resources
2. No upfront CAPEX for a standby or DR investment
3. Totally automatic in-site failover if production site occur disaster
4. Recovery backup data instantly and fastest
5. 2-factor, 2-phase authentication for secure access to online console
6. DR Solutions give you perfect peace-of-mind, automated in-site failover can be instantly restore services
7. Reliable platform with DR capability against interruption of business
8. CPC is the cloud solution provider in Hong Kong with truly geographically-separated data centers

Response Time Objective for SmartCLOUD DR and Backup Solution

Request Type	Response Time (Business Hours)	Response Time (Non-Business Hours)
Ad-Hoc Backup Request	4h	8h
File / Folder / VM Restoration	4h	8h
Disaster Recovery	4h	4h



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Build your own Cloud?



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Components	Description	Customer Cost	Use CPC
VM Hosts (x3)	Provides CPU and memory resource	180,000	Nil
Management , Internet and storage switch (x4)	Provides virtual networking environment	90,000	Nil
SAN Storage	Provides VM storage	500,000	Nil
Licensing	Licensing for Cloud platform	80,000	Nil
Co-location	Full cabinet co-location with 2KVa	120,000	Nil
Dedicated IT Staff (x2)	Responsible for installation, configuration and support of the system	500,000	Optional
Hardware Maintenance	Server hardware maintenance and support	50,000	Nil
Total		~\$1.5 millions + hidden costs	\$7,xxx/month up



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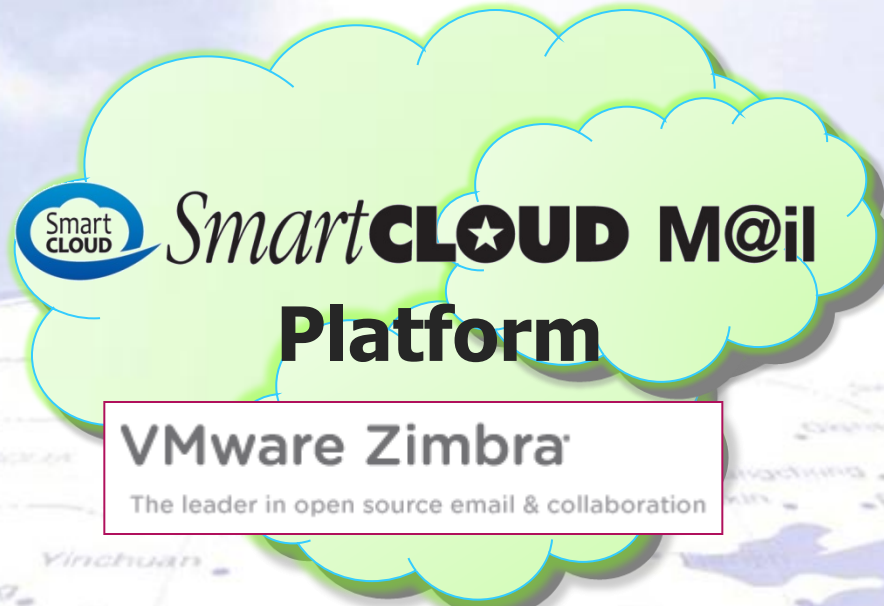
 *Smart***CLOUD** M@i



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SmartCLOUD M@il Service is built on the SmartCloud Platform, based on VMWare Zimbra Collaboration Suite.



Smart CLOUD *Smart***CLOUD** M@il
Platform

VMware Zimbra
The leader in open source email & collaboration

Provide Software-as-a-service solution requires no additional hardware and set-up



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Zimbra Collaboration Suite is widely deployed in Worldwide

Zimbra Customers in 110 Countries

Large Business	     
SMB & SME	     
Government	     
Education	       
Service Providers	            

Material provided by VMWare



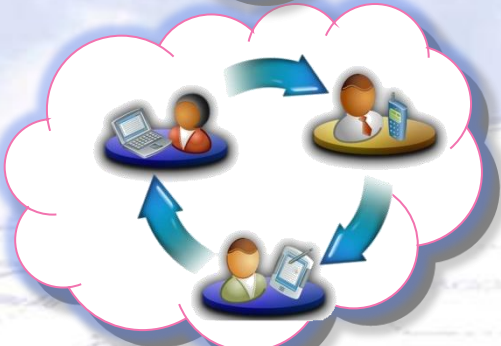
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Key Features

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Complete range of enterprise collaboration tools (e-mail, scheduling, document sharing)



Real-time synchronization of mails, contacts and calendars on all major mobile devices and various desktop OS



Protected by Cisco Ironport Anti-Virus Anti-Spam platform



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Key Features

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Hosted with 99.9% high availability on the CLOUD infrastructure



Turnkey end-to-end mobile security including remote shutdown and data wipe

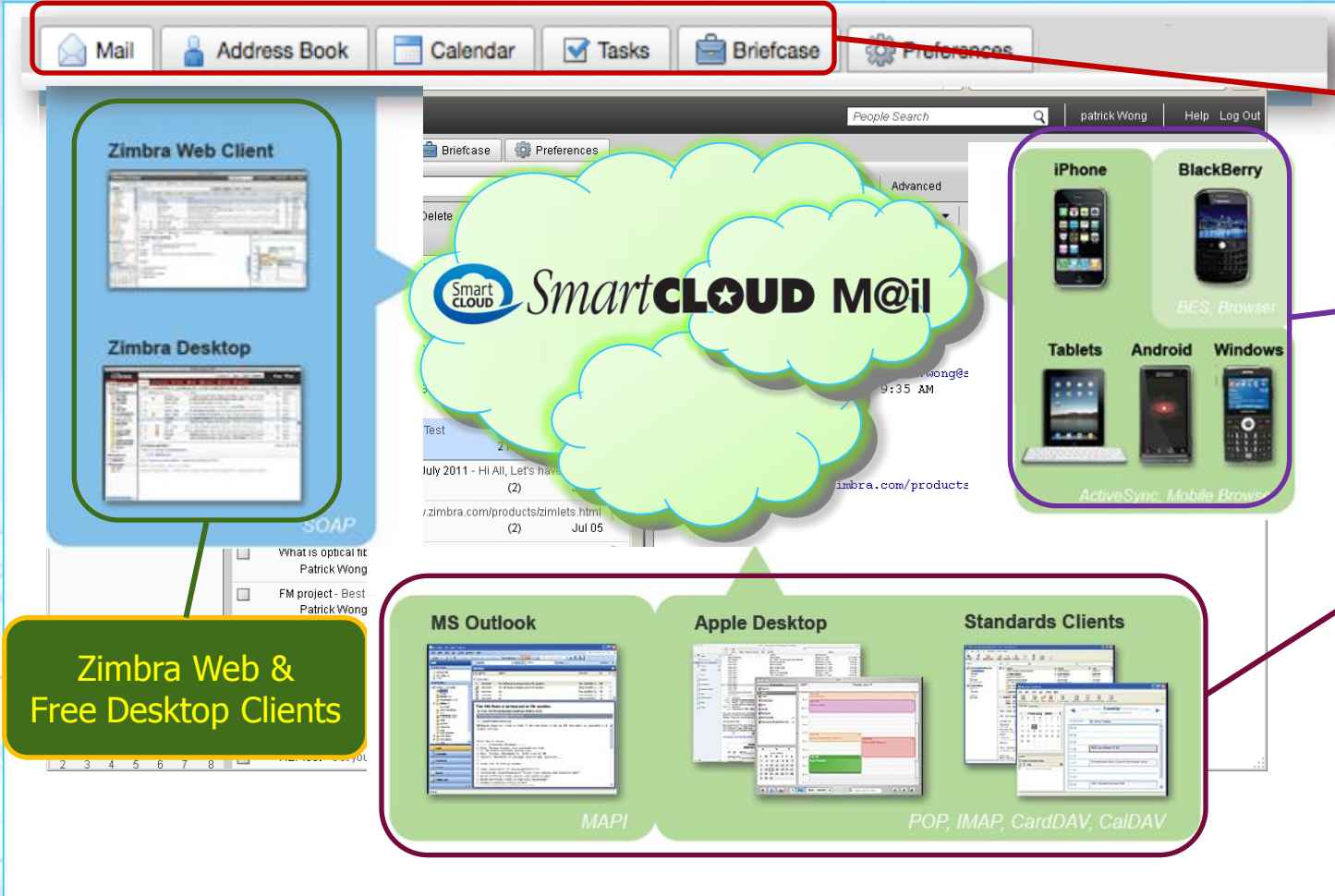


Intelligent Mailing to guarantee email communications between Hong Kong & China



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The screenshot displays the SmartCLOUD M@il web interface. At the top, a navigation bar includes icons for Mail, Address Book, Calendar, Tasks, Briefcase, and Preferences. Below this, a central cloud logo contains the text "Smart CLOUD M@il". To the left, a blue box highlights "Zimbra Web Client" and "Zimbra Desktop". To the right, a purple box lists mobile devices: iPhone, BlackBerry, Tablets, Android, and Windows. At the bottom, a green box shows "MS Outlook", "Apple Desktop", and "Standards Clients". A red box at the top left highlights the navigation bar, and a red line points from it to a callout box on the right.

Collaboration with mail, scheduling & document sharing

Push mail to various mobile phones or handheld devices

Connector for Outlook, Apple Desktop or other standard email clients

Zimbra Web & Free Desktop Clients



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Details Service Feature

1. **Web client with email, calendar, sharing and documents management features**

- Support Multiple languages (Traditional/Simplified Chinese & English and more)
- Support the mobile web browser that can be run in various handheld devices and get access to collaboration functions

2. **Free Desktop client supports running on Windows, Mac & Linux desktop computers**

3. **Support Push Mail to mobile devices (iPhone, Smartphone or Blackberry)**

4. **Web interface for Administrator to manage their mailboxes**

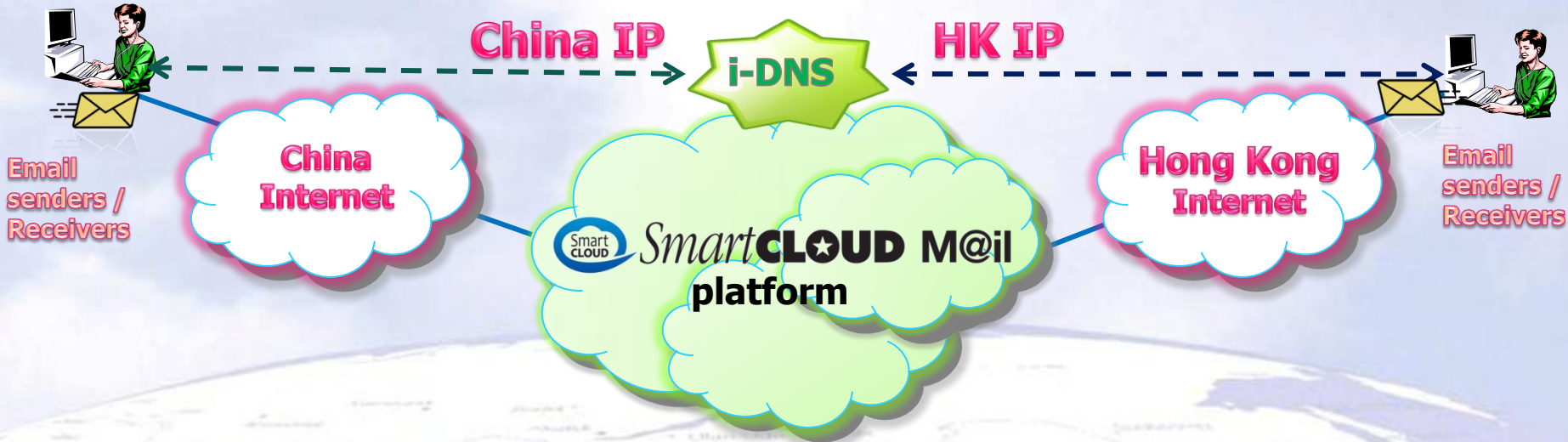
5. **Advanced Anti-Virus Anti-Spam (AVAS) by Cisco IronPort**

6. **Intelligent Mailing function based on i-DNS for 2 regions (HK & China)**

7. **Archiving service (optional)**



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The i-DNS will reply HK or China IP of the SmartCLOUD M@il platform base on client's ISP DNS source IP in incoming direction

The SmartCLOUD M@il platform will select the best route in outgoing direction to send emails based on the destination IP address

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The Washington Times

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Google: China blocking email services

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**** FILE **** Pedestrians pass the Google China headquarters in Beijing in March 2010. Google said on Monday, March 21, 2011, the Chinese government is interfering with its email services in China, making it difficult for users to gain access to its Gmail program, amid an intensified internet crackdown following widespread unrest in the Middle East. (AP Photo/Ng Han Guan/file)

By Tini Tran - Associated Press Monday, March 21, 2011

Text Size: +- BEIJING (AP) — Google said Monday the Chinese government is interfering with its email services in China, making it difficult for users to gain access to its Gmail program, amid an intensified Internet crackdown following widespread unrest in the Middle East.

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Google accuses China of blocking email

The Associated Press Posted: Mar 21, 2011 5:32 AM ET | Last Updated: Mar 21, 2011 7:34 AM ET



People walk past a logo next to the main entrance of the Google building in Zurich March 9. (Arnd Wiegmann/Reuters)

Google said Monday the Chinese government is interfering with its email services in China, making it difficult for users to access its Gmail program, amid an intensified internet crackdown following widespread unrest in the Middle East.

"There is no technical issue on our side; we have checked extensively. This is a government blockage carefully designed to look like the problem is with Gmail," the company said in a brief statement.

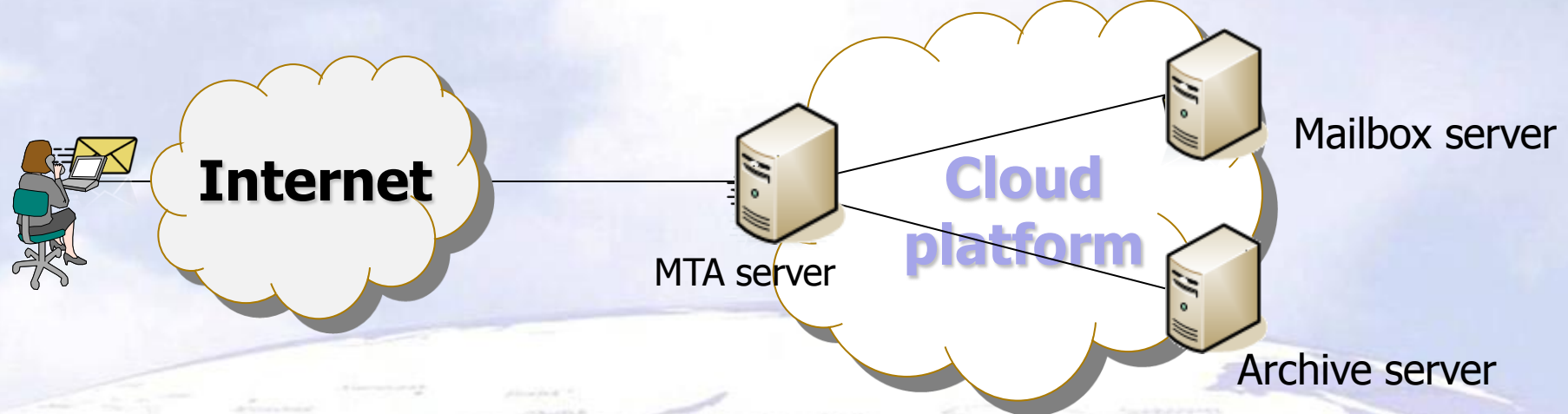
Need to Know

- China already blocks popular social media sites such as YouTube.



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The Archiving Service is based on Zimbra Archiving and Discovery feature



All incoming/outgoing emails will be copied to the Archive Server

An admin account will be provided to manage the archived email in the Archive server



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Backup, Replication and Recovery



SmartCLOUD Backup, Replication and Recovery Service Introduction



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- The SmartCLOUD BRR Service is a service that provides **managed** backup, replication and recovery to SmartCLOUD Compute platform and external customers who are utilizing VMWare platform.
- Fully managed by CITIC Telecom CPC's Cloud Operation Centre 24x7x365.
- Rapid application items, files, folders and Virtual Machine backup and recovery.



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- **Publishes the backup as a ready-to-restore VMDK file**
 - Compressed, de-duplicated and incremental disk-based backup
- **Automatic verify the recoverability of every backup**
 - Every virtual machine
 - Every restore point
- **Agent-less**
 - No additional software to install in guest system
 - No additional firewall port to open
- **Advanced VSS Integration**
 - Recover Windows critical applications: Windows AD, Exchange, SQL.. Etc



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- **Secure handling and storage**
 - All data is transferred to our secure storage network through SSL over the management private network
- **Data compression**
 - Data being backup is automatically compressed
- **De-duplication**
 - In event there are multiple copies of the same files on customer's machines, only one copy will be kept. Hence it saves time and minimizes disk usage requirement
- **Customizable Backup Schedule**
 - Schedule and retention option can be customized



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- **Customer Notification**

- Upon backup job completion, customer will be notified by email including processed objects and session details

- **Proactive Monitoring**

- Should an irregularity be detected in schedule backup job, CPC Backup Administrator will proactively take appropriate action to investigate and work with customer's nominated technical contact to remedy the problem

- **Onsite and Offsite Options**

- As a value added option, we can replicate the backup data to our secondary Cloud site, providing a redundant offsite copy.
- Customer can further subscribe SmartCLOUD Compute service at secondary site for DR purpose



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Thank You!

“Find Your Missing Part!”

Missing a reliable **COMMUNICATION**
or a trusted **SECURITY** solution
may hinder your business!



 **SmartCLOUD**
Cloud Computing Services

TrueCONNECT™
“One Region, One Network”
MPLS VPN Solution

 **TrustCSI™**
Peace of Mind Integrated Suite of
Information Security Services

www.citictel-cpc.com